

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claim 16 without prejudice or disclaimer, AMEND claims 1-4, 6-8, 10, 12-13, 15, 17, 19, 21, and 25-31 and ADD new claims 32-35 in accordance with the following:

1. (currently amended) A method of driving a plasma display panel having a plurality of first electrodes, a plurality of second electrodes adjacently disposed alternately to said first electrodes, and a plurality of third electrodes formed to cross said first and second electrodes, comprising ~~the steps of~~:

carrying out an address discharge between said second electrodes and said third electrodes;

carrying out an auxiliary discharge to decrease ~~the~~ a volume of wall charges, accumulated on a display cell in which a sustain discharge is not intended, to a level ~~which that~~ cannot generate ~~a~~ the sustain discharge; and

carrying out ~~a~~ the sustain discharge by alternately applying sustain pulses to said first and second electrodes, wherein the auxiliary discharge is carried out by applying a voltage pulse, having the same polarity as the voltage pulse for carrying out the address discharge, between said second electrodes and said third electrodes.

2. (currently amended) The method of driving the plasma display panel as claimed in claim 4 27, further comprising ~~the steps of~~:

generating a discharge in a selected cell by applying a voltage pulse, with the said third electrodes set to have a first polarity and the said second electrodes set to have a second polarity;

carrying out an the address discharge to form wall charges of a first polarity on at least said second electrodes, with the said first electrodes set to have a first polarity with respect to said second electrodes, and also to form wall charges of a second polarity on the said first electrodes; and

applying a voltage pulse to said first or third electrodes or to both electrodes so as to set

~~the said~~ third electrodes to have a first polarity and to set ~~the said~~ first electrodes to have a second polarity, thereby to generate a discharge in a discharge cell that starts a discharge without application, to this cell, a voltage pulse that brings about an the address discharge through said third electrodes.

3. (currently amended) The method of driving the plasma display panel as claimed in claim 4 27, wherein a voltage to be applied to said third electrodes when carrying out the auxiliary discharge is equivalent to a voltage of an address pulse for carrying out an the address discharge.

4. (currently amended) The method of driving the plasma display panel as claimed in claim 4 27, wherein a voltage to be applied to said second electrodes when carrying out the auxiliary discharge is a voltage which decreases a potential difference between the voltage applied to said second electrodes and a voltage of an additional pulse to be applied to said first electrodes.

5. (original) The method of driving the plasma display panel as claimed in claim 4, wherein the voltage to be applied to said second electrodes when carrying out the auxiliary discharge is equivalent to a voltage of a non-selected electrode of said second electrodes during an address period.

6. (currently amended) The method of driving the plasma display panel as claimed in claim 4 27, wherein said first electrodes and said second electrodes are disposed, in parallel, alternately and said third electrodes are orthogonal ~~with~~ to said first and second electrodes.

7. (currently amended) The method of driving the plasma display panel as claimed in claim 4 27, ~~further comprising the steps of:~~

applying a voltage pulse, having the same polarity as a voltage pulse for carrying out the address discharge, between said second electrodes and said third electrodes; and

carrying out a further auxiliary discharge to decrease the volume of wall charges, accumulated on a display cell in which a sustain discharge is not intended, without carrying out the address discharge.

8. (currently amended) The method of driving the plasma display panel as claimed in claim 7, further comprising ~~the steps of~~:

applying a voltage pulse, having the same polarity as a voltage pulse for carrying out the address discharge between said first electrodes and said second electrodes and having a voltage waveform that finally becomes more than the voltage between said first electrodes and said second electrodes in the time of addressing; and

carrying out a further auxiliary discharge to decrease the volume of wall charges, accumulated on a display cell in which a sustain discharge is not intended, without carrying out the address discharge.

9. (original) The method of driving the plasma display panel as claimed in claim 8, wherein the voltage waveform applied between said first electrodes and said second electrodes when carrying out the further auxiliary discharge is a voltage waveform having a less steep inclination.

10. (currently amended) The method of driving the plasma display panel as claimed in claim 4 27, wherein said second electrodes are oppositely driven into an odd electrode group and an even electrode group in temporal and, after finishing an address period of one of said odd and even electrode groups, further comprising ~~the steps of~~:

applying a voltage pulse, having the same polarity as a voltage pulse for carrying out the address discharge on said second electrodes and having the same or a higher voltage than that of a scan pulse; and

carrying out a further auxiliary discharge to decrease the volume of wall charges, accumulated on a display cell in which a sustain discharge is not intended, without carrying out the address discharge.

11. (original) The method of driving the plasma display panel as claimed in claim 10, wherein the voltage applied between said second electrodes and said first electrodes constituting a display line when carrying out the further auxiliary discharge is equivalent to a voltage applied to said second electrodes for carrying out the auxiliary discharge.

12. (currently amended) A method of driving a plasma display panel having a plurality of first electrodes, a plurality of second electrodes adjacently disposed ~~adjacently and~~

alternately to said first electrodes, and a plurality of third electrodes formed to cross said first and second electrodes, ~~wherein~~ comprising:

~~oppositely driving said second electrodes are oppositely driven into an odd electrode group and an even electrode group in temporal; and~~

~~after finishing an address period of one of said odd and even electrode groups, setting a voltage of any of said second electrodes finishing an address process is set lower than a non-selection voltage of said second electrode when carrying out the address process~~ and after finishing an address period of one of said odd and even electrode groups.

13. (currently amended) A method of driving a plasma display panel having a plurality of first electrodes, a plurality of second electrodes adjacently disposed alternately to said first electrodes, and a plurality of third electrodes formed to cross said first and second electrodes, ~~wherein~~ comprising:

dividing said first electrodes and said second electrodes ~~are divided into an odd electrode group and an even electrode group, and wherein~~ each adjacent odd electrode of said odd electrode group and each adjacent even electrode of said even electrode group or each adjacent odd and even electrode constitutes a display line;

separately carrying out in temporal a plurality of discharges of an initial stage of a sustain discharge period ~~are oppositely carried out by each adjacent odd electrode or each adjacent even electrode; and~~

setting low one or both voltages of said first electrodes and said second electrodes, where the sustain discharge is not carried out, ~~are set low.~~

14. (original) The method of driving the plasma display panel as claimed in claim 13, wherein a voltage applied to an electrode not carrying out a discharge is set low by bringing a driving circuit for said electrode into a high impedance state.

15. (currently amended) A method of driving a plasma display panel having a plurality of first electrodes, a plurality of second electrodes adjacently disposed ~~adjacently and alternately to said first electrodes~~, and a plurality of third electrodes formed to cross said first and second electrodes, ~~comprising the steps of:~~

carrying out an address discharge between said second electrodes and said third electrodes;

carrying out a sustain discharge by alternately applying sustain pulses to said first and second electrodes; and

carrying out an auxiliary discharge on a scale larger than the scale of the sustain discharge carried out immediately before, wherein the auxiliary discharge is carried out by generating a discharge in a selected cell by applying a voltage pulse, with said third electrodes set to have a first polarity and said second electrodes set to have a second polarity,

forming wall charges of said first polarity on at least said second electrodes, with said first electrodes set to have said first polarity with respect to said second electrodes, and forming wall charges of said second polarity on said first electrodes, and

applying a voltage pulse to said third or second electrodes or to both electrodes so as to set said third electrodes to have said first polarity and to set said second electrodes to have said second polarity.

16. (CANCEL).

17. (currently amended) The method of driving the plasma display panel as claimed in claim 15, wherein a voltage to be applied to said third electrodes when carrying out the auxiliary discharge is equivalent to a voltage of a voltage pulse to be applied to said third electrodes in order to execute ~~an~~ the address discharge during an address period.

18. (original) The method of driving the plasma display panel as claimed in claim 15, wherein a voltage to be applied to said third electrodes when carrying out the auxiliary discharge has a polarity opposite to the polarity of the potentials of said second and third electrodes during a sustain discharge period.

19. (currently amended) The method of driving the plasma display panel as claimed in claim 15, wherein a voltage to be applied to said second electrodes when carrying out the auxiliary discharge is equivalent to a voltage selectively applied to said second electrodes at the time of carrying out ~~an~~ the address discharge.

20. (original) The method of driving the plasma display panel as claimed in claim 15, wherein a voltage to be applied to said first electrodes when carrying out the auxiliary discharge

is a voltage having a polarity opposite to the polarity of said second electrodes.

21. (currently amended) The method of driving the plasma display panel as claimed in claim 20, wherein the voltage to be applied to said first electrodes when carrying out the auxiliary discharge is equivalent to a voltage to be applied to said first electrodes at the time of carrying out ~~an~~ the address discharge.

22. (original) The method of driving the plasma display panel as claimed in claim 15, wherein the auxiliary discharge is carried out once in a plurality of sub-fields.

23. (original) The method of driving the plasma display panel as claimed in claim 22, wherein the auxiliary discharge is carried out once in one frame or once in one field.

24. (original) The method of driving the plasma display panel as claimed in claim 15, wherein said first electrodes and said second electrodes are disposed alternately and in parallel, and said third electrodes are orthogonal to said first and second electrodes.

25. (currently amended) A method of driving a plasma display panel having a plurality of first electrodes, a plurality of second electrodes adjacently disposed ~~adjacently and alternately to said first electrodes~~, and a plurality of third electrodes formed to cross said first and second electrodes, comprising: ~~for~~

applying, at a reset timing, an erasing pulse having a less steep inclination with respect to said second electrodes to which a scan pulse is applied, ~~comprising the step of:~~ and

rapidly changing a pulse voltage until the pulse voltage becomes equivalent to a voltage of the scan pulse, at an end stage of the erasing pulse.

26. (currently amended) The method of driving the plasma display panel as claimed in claim 25, wherein said first electrodes and said second electrodes are alternately disposed in parallel, and said third electrodes are orthogonal ~~with~~ to said first and second electrodes.

27. (currently amended) A method of driving a plasma display panel having a plurality of first electrodes, a plurality of second electrodes adjacently disposed ~~adjacently and alternately to said first electrodes~~, and a plurality of third electrodes formed to cross said first and

second electrodes, comprising the steps of:

carrying out an address discharge between said second electrodes and said third electrodes; and

carrying out a sustain discharge by alternately applying sustain pulses to said first and second electrodes, wherein an auxiliary discharge is carried out, between said first electrodes and said third electrodes, and during between the address discharge and the sustain discharge.

28. (currently amended) A plasma display panel comprising:

a plurality of first electrodes;

a plurality of second electrodes adjacently disposed ~~adjacently and~~ alternately to said first electrodes;

a plurality of third electrodes formed to cross said first and second electrodes; and

a control circuit for carrying out an address discharge between said second electrodes and the said third electrodes, wherein said control circuit carries out ~~a sustain~~ an auxiliary discharge to decrease the volume of wall charges, accumulated on a display cell in which a sustain discharge is not intended, to a level which cannot generate a sustain discharge, and carries out a sustain discharge by alternately applying sustain pulses to said first and second electrodes, wherein the auxiliary discharge is carried out by applying a voltage pulse, having the same polarity as a voltage pulse for carrying out the address discharge, between said second electrodes and said third electrodes.

29. (currently amended) The plasma display panel as claimed in claim 28, wherein

said first electrodes and said second electrodes are disposed alternately in parallel, and said third electrodes are orthogonal ~~with~~ to said first and second electrodes.

30. (currently amended) A plasma display panel comprising:

a plurality of first electrodes;

a plurality of second electrodes adjacently disposed ~~adjacently and~~ alternately to said first electrodes;

a plurality of third electrodes formed to cross said first and second electrodes; and

a control circuit ~~for~~ carrying out an address discharge between said second electrodes and said third electrodes, ~~wherein said control circuit and carries~~ carrying out an auxiliary discharge on a scale larger than the scale of a sustain discharge carried out immediately before,

wherein the auxiliary discharge is carried out by

generating a discharge in a selected cell by applying a voltage pulse, with said third electrodes set to have a first polarity and said second electrodes set to have a second polarity, forming wall charges of said first polarity on at least said second electrodes, with said first polarity on at least said second electrodes, with said first electrodes set to have said first polarity with respect to said second electrodes, and forming wall charges of said second polarity on said first electrodes; and

applying voltage pulse to said third or second electrodes or to both electrodes so as to set said third electrodes to have said first polarity and to set said second electrodes to have said second polarity.

31. (currently amended) The plasma display panel as claimed in claim 30, wherein said first electrodes and said second electrodes are disposed alternately in parallel, and said third electrodes are orthogonal with to said first and second electrodes.

32. (new) A method of driving a plasma display panel having a plurality of first electrodes, a plurality of second electrodes adjacently disposed alternately to said first electrodes, and a plurality of third electrodes formed to cross said first and second electrodes, comprising:

generating a discharge in a selected cell by applying a voltage pulse, with said third electrodes set to have a first polarity and said second electrodes set to have a second polarity;

carrying out an address discharge between said second electrodes and said third electrodes, to form wall charges of a first polarity on at least said second electrodes, with said first electrodes set to have said first polarity with respect to said second electrodes, and to form wall charges having said second polarity on said first electrodes;

applying a voltage pulse to said first or third electrodes or to both electrodes so as to set said third electrodes to have said first polarity and to set said first electrodes to have said second polarity to generate a discharge in a discharge cell that starts a discharge without applying a voltage pulse that brings about the address discharge through said third electrodes;

carrying out an auxiliary discharge to decrease a volume of wall charges, accumulated on a display cell in which a sustain discharge is not intended, to a level that cannot generate said sustain discharge; and

carrying out said sustain discharge by alternately applying sustain pulses to said first and second electrodes.

33. (new) A method of driving a plasma display panel having a plurality of first electrodes, a plurality of second electrodes adjacently disposed alternately to said first electrodes, and a plurality of third electrodes formed to cross said first and second electrodes, comprising:

carrying out an address discharge between said second electrodes and said third electrodes;

carrying out an auxiliary discharge to decrease a volume of wall charges, accumulated on a display cell in which a sustain discharge is not intended, to a level which cannot generate said sustain discharge; and

carrying out said sustain discharge by alternately applying sustain pulses to said first and second electrodes, wherein a voltage to be applied to said second electrodes, when carrying out the auxiliary discharge, is a voltage that decreases a potential difference between the voltage applied to said second electrodes and the voltage of an additional pulse to be applied to said first electrodes.

34. (new) A plasma display panel comprising:

a plurality of first electrodes;

a plurality of second electrodes adjacently disposed alternately to said first electrodes;

a plurality of third electrodes formed to cross said first and second electrodes; and

a control circuit carrying out an address discharge between said second electrodes and said third electrodes, carrying out a sustain discharge by alternately applying sustain pulses to said first and second electrodes, and carrying out an auxiliary discharge on a scale larger than the scale of the sustain discharge carried out immediately before, wherein the auxiliary discharge is carried out by

generating a discharge in a selected cell by applying a voltage pulse, with said third electrodes set to have a first polarity and said second electrodes set to have a second polarity,

forming wall charges of said first polarity on at least said second electrodes, with said first electrodes set to have said first polarity with respect to said second

electrodes,

forming wall charges of said second polarity on said first electrodes, and
applying a voltage pulse to said third or second electrodes or to both
electrodes so as to set said third electrodes to have said first polarity and to set said
second electrodes to have said second polarity.

35. (new) A plasma display panel comprising:

a plurality of first electrodes;

a plurality of second electrodes adjacently disposed alternately to said first
electrodes;

a plurality of third electrodes formed to cross said first and second electrodes; and

a control circuit carrying out an address discharge between said second electrodes and
said third electrodes, wherein said control circuit carries out a sustain discharge by
alternately applying sustain pulses to said first and second electrodes, and carries out an
auxiliary discharge between said first electrodes and said third electrodes, between the
address discharge and the sustain discharge.